005FFF 624E760

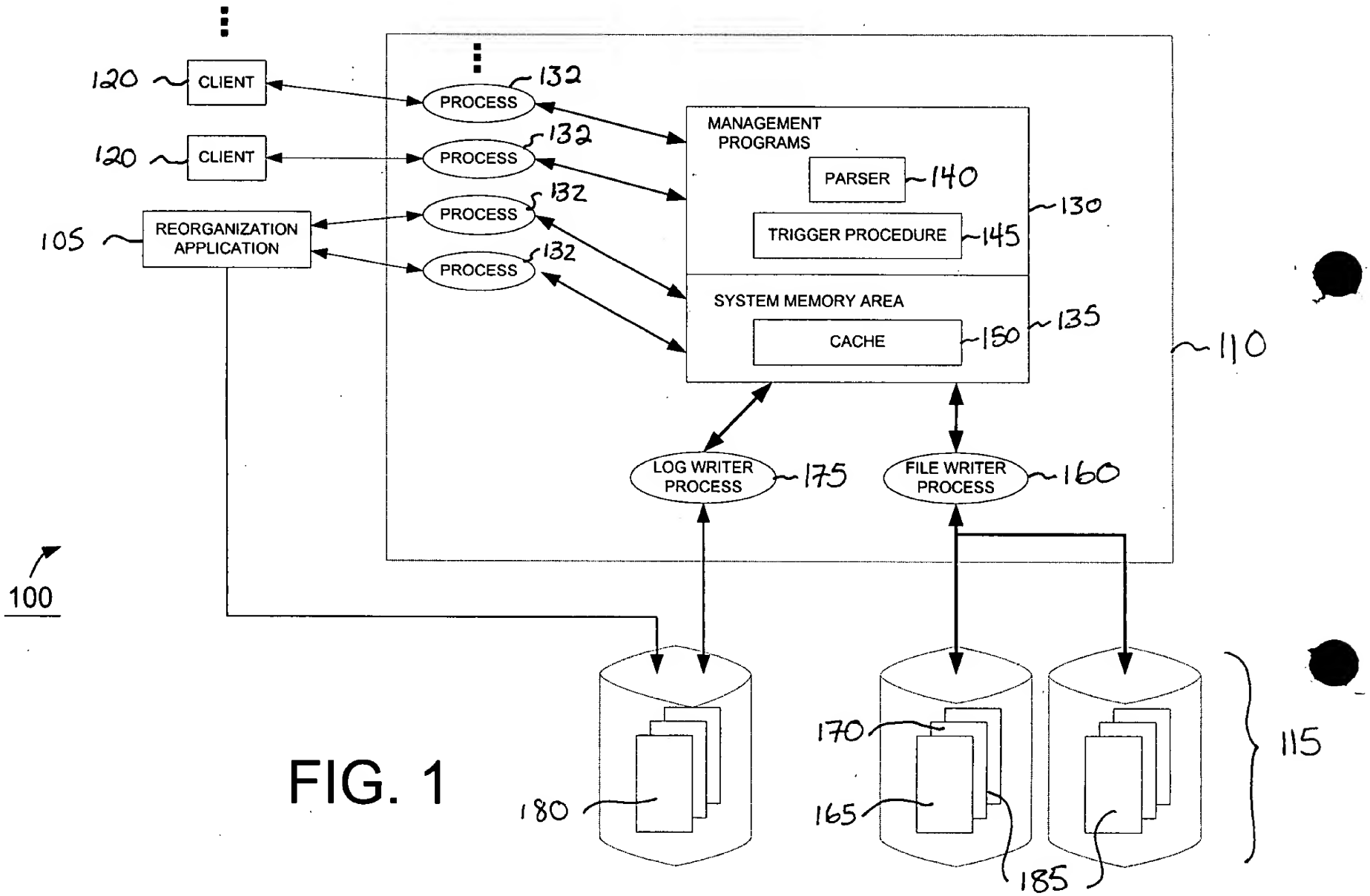

FIG. 1

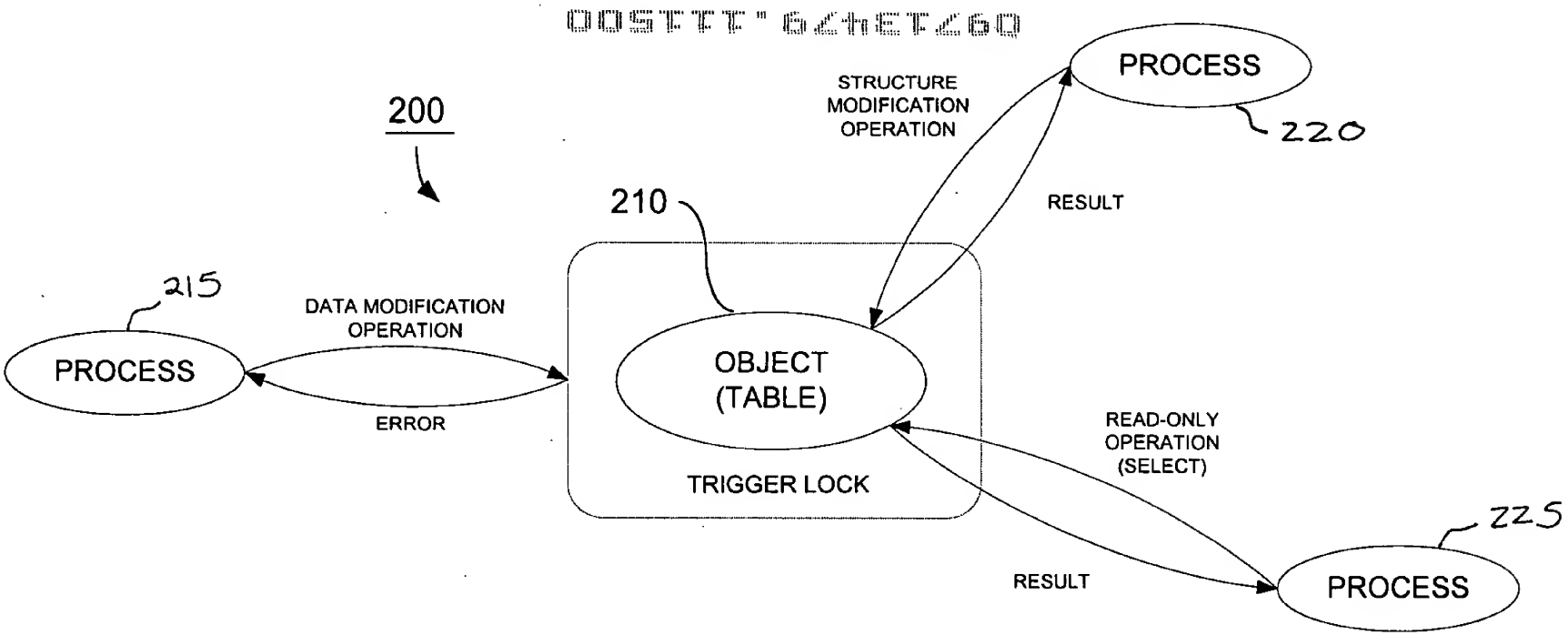

FIG. 2

300

305 310 315

```
create or replace trigger TRIGGERNAME before STATEMENT(S) on OBJECTNAME
for each row
begin
raise_application_error(ERROR NUMBER, ERROR MESSAGE);
end
```

320

FIG. 3

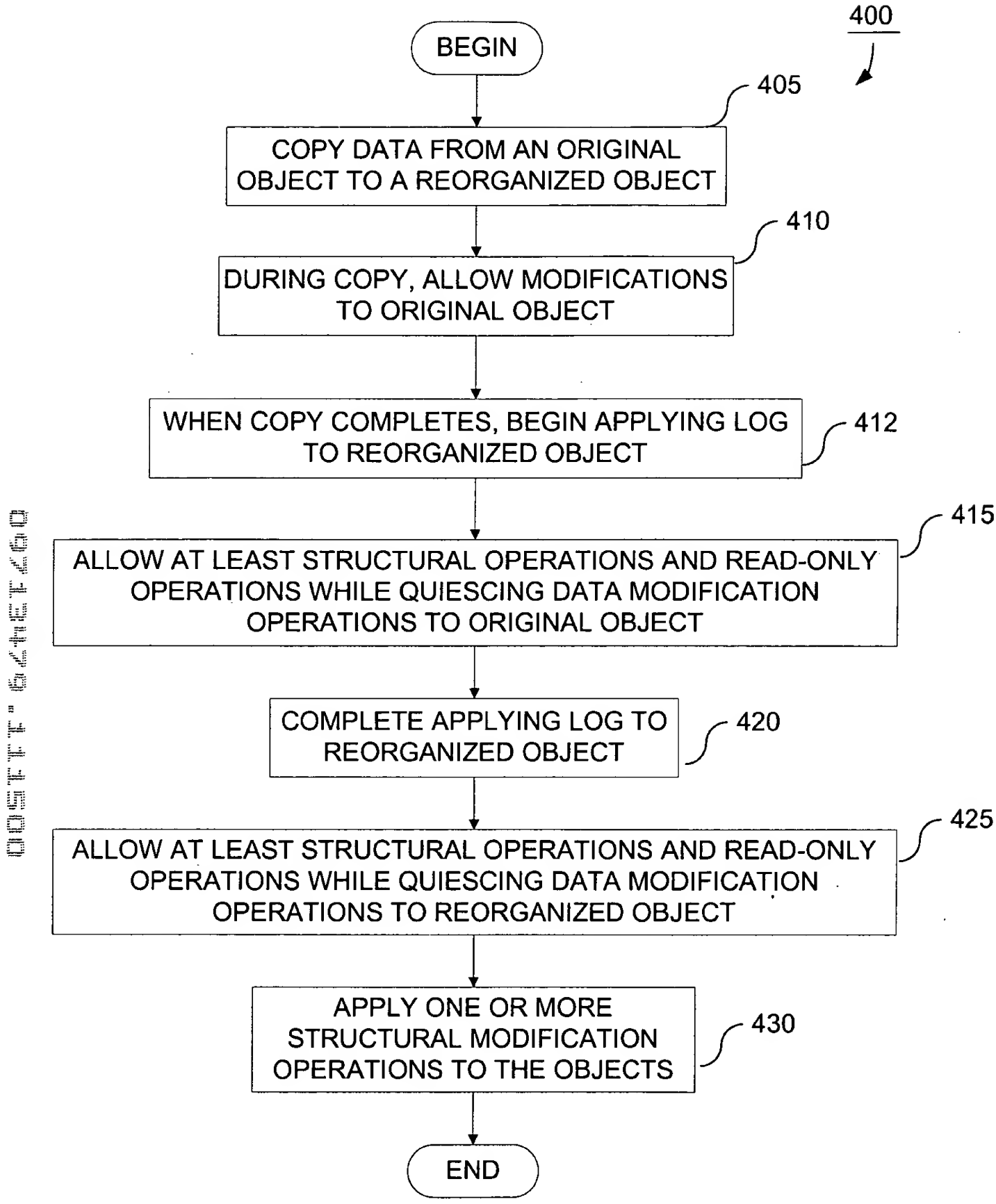
400
BEGIN
405
COPY DATA FROM AN ORIGINAL OBJECT TO A REORGANIZED OBJECT
410
DURING COPY, ALLOW MODIFICATIONS TO ORIGINAL OBJECT
WHEN COPY COMPLETES, BEGIN APPLYING LOG TO REORGANIZED OBJECT
412
415
ALLOW AT LEAST STRUCTURAL OPERATIONS AND READ-ONLY OPERATIONS WHILE QUIESCING DATA MODIFICATION OPERATIONS TO ORIGINAL OBJECT
COMPLETE APPLYING LOG TO REORGANIZED OBJECT
420
425
ALLOW AT LEAST STRUCTURAL OPERATIONS AND READ-ONLY OPERATIONS WHILE QUIESCING DATA MODIFICATION OPERATIONS TO REORGANIZED OBJECT
APPLY ONE OR MORE STRUCTURAL MODIFICATION OPERATIONS TO THE OBJECTS
430
END

FIG. 4

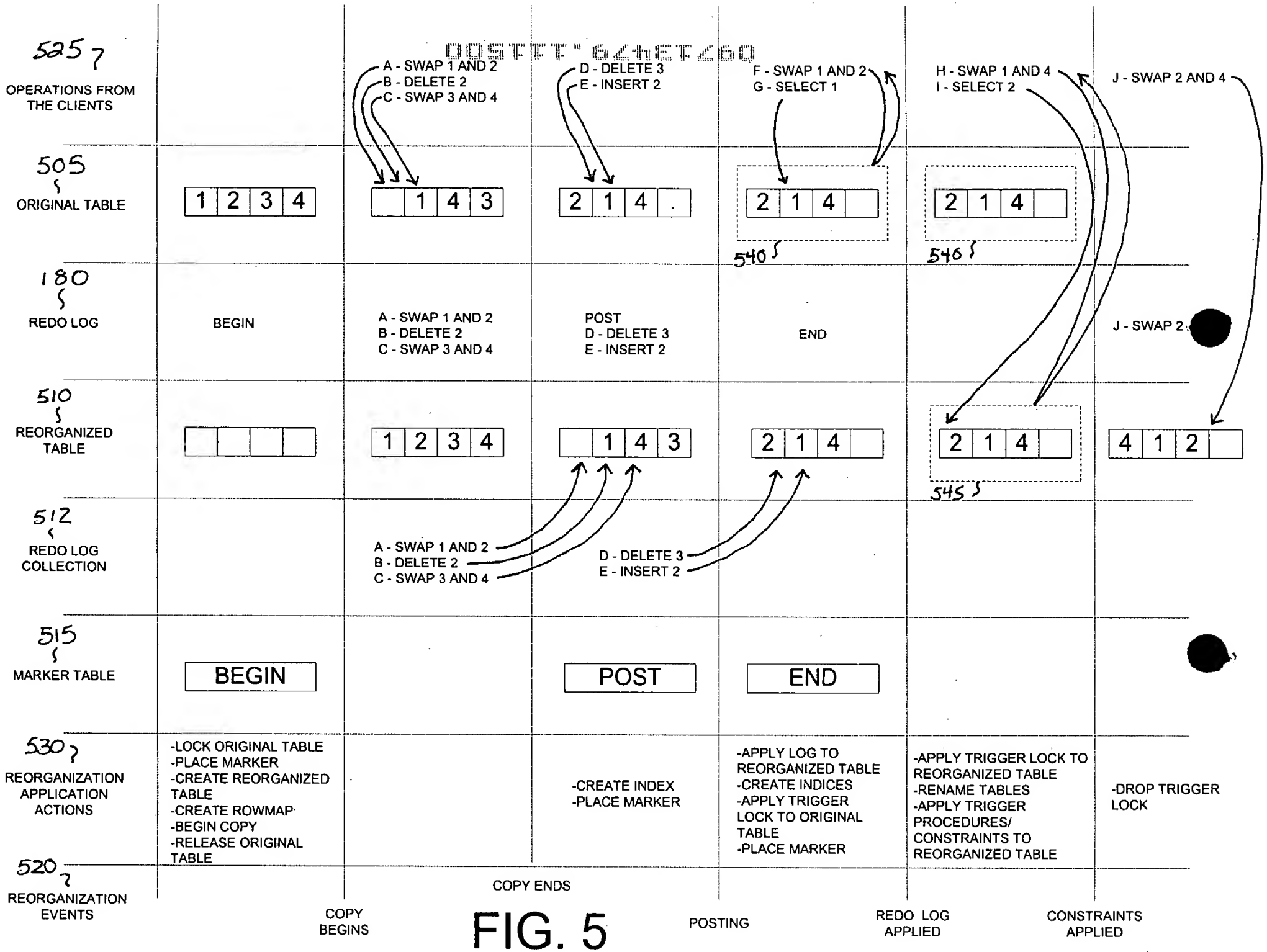
525
OPERATIONS FROM THE CLIENTS
A - SWAP 1 AND 2
B - DELETE 2
C - SWAP 3 AND 4
D - DELETE 3
E - INSERT 2
F - SWAP 1 AND 2
G - SELECT 1
H - SWAP 1 AND 4
I - SELECT 2
J - SWAP 2 AND 4
505
ORIGINAL TABLE
1 2 3 4
1 4 3
2 1 4 .
2 1 4
2 1 4
540
546
180
REDO LOG
BEGIN
A - SWAP 1 AND 2
B - DELETE 2
C - SWAP 3 AND 4
POST
D - DELETE 3
E - INSERT 2
END
J - SWAP 2
510
REORGANIZED TABLE
1 2 3 4
1 4 3
2 1 4
2 1 4
4 1 2
545
512
REDO LOG COLLECTION
A - SWAP 1 AND 2
B - DELETE 2
C - SWAP 3 AND 4
D - DELETE 3
E - INSERT 2
515
MARKER TABLE
BEGIN
POST
END
530
REORGANIZATION APPLICATION ACTIONS
-LOCK ORIGINAL TABLE
-PLACE MARKER
-CREATE REORGANIZED TABLE
-CREATE ROWMAP
-BEGIN COPY
-RELEASE ORIGINAL TABLE
-CREATE INDEX
-PLACE MARKER
-APPLY LOG TO REORGANIZED TABLE
-CREATE INDICES
-APPLY TRIGGER LOCK TO ORIGINAL TABLE
-PLACE MARKER
-APPLY TRIGGER LOCK TO REORGANIZED TABLE
-RENAME TABLES
-APPLY TRIGGER PROCEDURES/ CONSTRAINTS TO REORGANIZED TABLE
-DROP TRIGGER LOCK
520
REORGANIZATION EVENTS
COPY BEGINS
COPY ENDS
POSTING
REDO LOG APPLIED
CONSTRAINTS APPLIED

FIG. 5

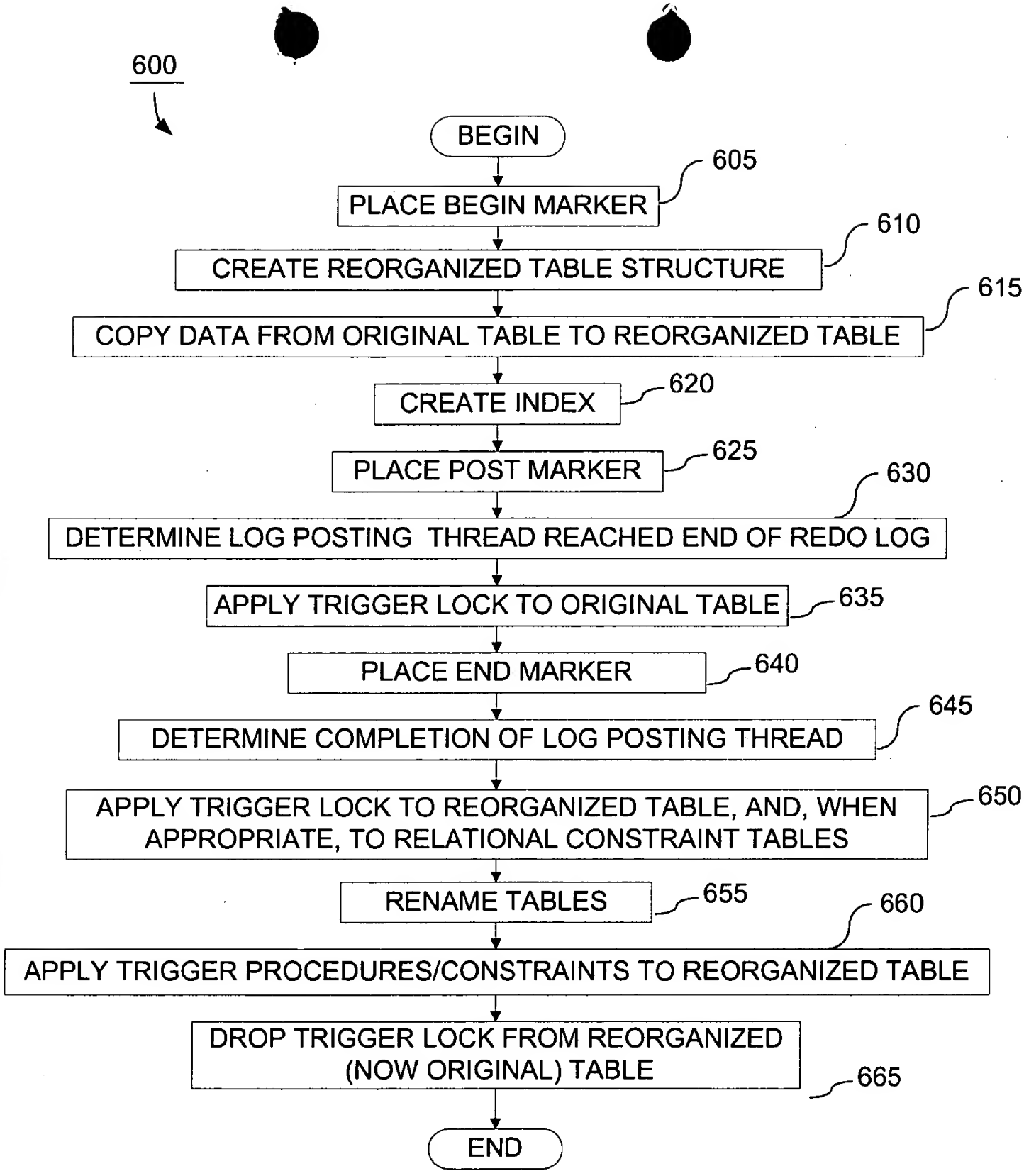
600
BEGIN
605
PLACE BEGIN MARKER
610
CREATE REORGANIZED TABLE STRUCTURE
615
COPY DATA FROM ORIGINAL TABLE TO REORGANIZED TABLE
620
CREATE INDEX
625
PLACE POST MARKER
630
DETERMINE LOG POSTING THREAD REACHED END OF REDO LOG
635
APPLY TRIGGER LOCK TO ORIGINAL TABLE
640
PLACE END MARKER
645
DETERMINE COMPLETION OF LOG POSTING THREAD
650
APPLY TRIGGER LOCK TO REORGANIZED TABLE, AND, WHEN APPROPRIATE, TO RELATIONAL CONSTRAINT TABLES
655
RENAME TABLES
660
APPLY TRIGGER PROCEDURES/CONSTRAINTS TO REORGANIZED TABLE
665
DROP TRIGGER LOCK FROM REORGANIZED (NOW ORIGINAL) TABLE
END

FIG. 6

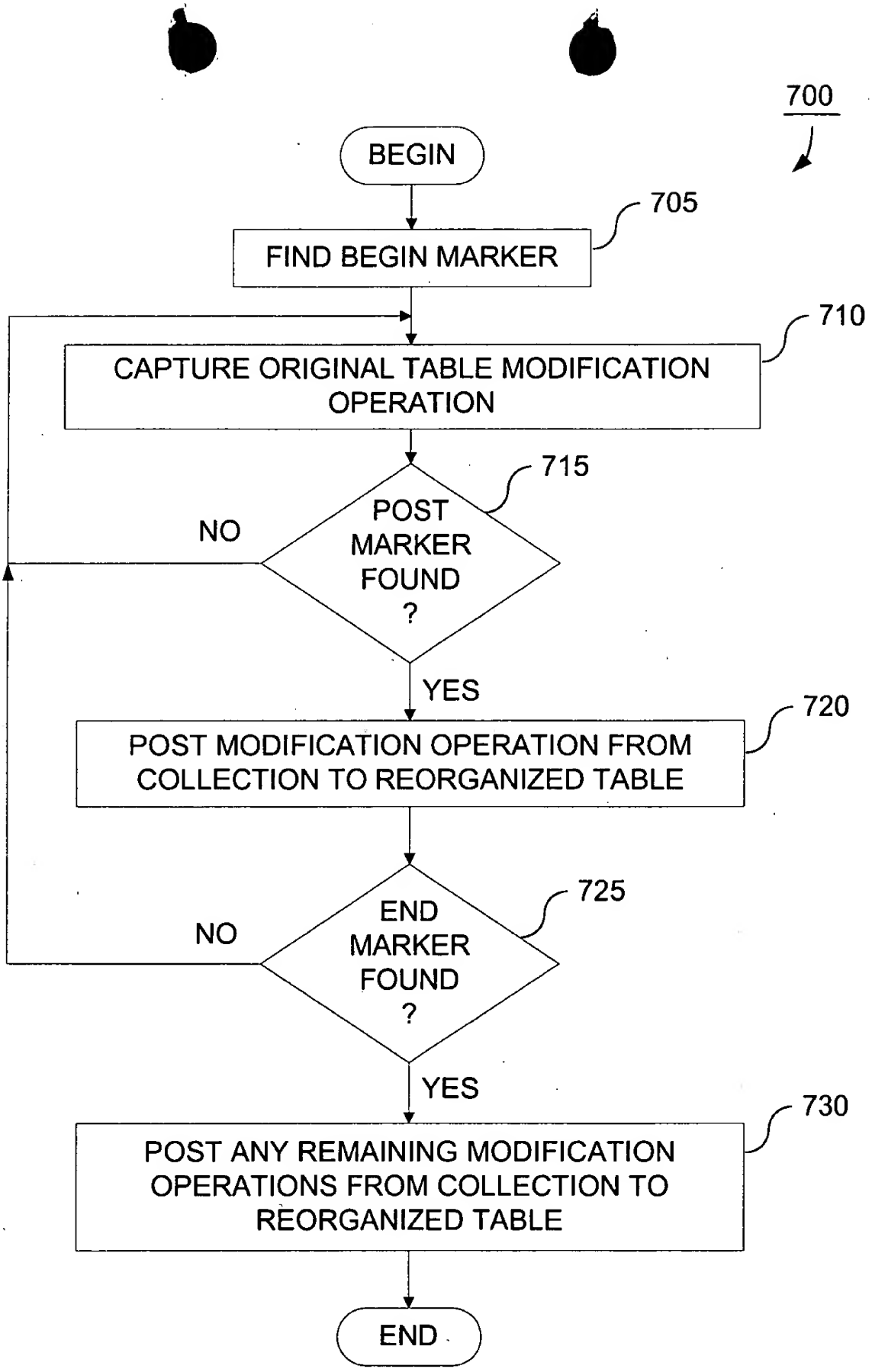
700
BEGIN
705
FIND BEGIN MARKER
710
CAPTURE ORIGINAL TABLE MODIFICATION OPERATION
715
POST MARKER FOUND ?
NO
YES
720
POST MODIFICATION OPERATION FROM COLLECTION TO REORGANIZED TABLE
725
END MARKER FOUND ?
NO
YES
730
POST ANY REMAINING MODIFICATION OPERATIONS FROM COLLECTION TO REORGANIZED TABLE
END

FIG. 7